IrisGlow - Eye Care Hospital Management System

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Abstract

IrisGlow is an innovative web-based Eye Care Hospital Management System designed to revolutionize hospital operations and offer comprehensive eye care services. The primary aim of the system is to optimize hospital efficiency, enhance patient care, and integrate cutting-edge technologies to create an exceptional patient experience. Crafted exclusively for eye care hospitals, this project includes crucial functionalities such as patient management, appointment scheduling, medical records, billing, advanced eye disease self-detection, and a range of additional features for informed patient care.

Module-wise Functionalities:

1. Eye Care:

- **Medical Information:**
  - Access detailed information about various eye-related medical conditions, diseases, and treatment options.
  - View symptoms, causes, and preventive measures for eye diseases.
  - Browse articles and resources related to eye health, surgery, and post-operative care.
- **Home Remedies:**
  - Discover home remedies and practices to alleviate common eye discomforts and minor issues.
  - Access tips for maintaining healthy eyes through lifestyle.

2. Appointment:

- **Medical Appointments:**
  - Patients can view the availability of eye doctors and specialists for medical treatment.
  - Book, schedule, or cancel medical appointments online.
- **Surgical Appointments:**
  - Schedule surgical consultations and procedures with specific surgeons.

3. Diseases:

- **Disease Information:**
  - Access comprehensive information on various eye diseases, including glaucoma, cataracts, and macular degeneration.

- View detailed descriptions of symptoms, risk factors, and diagnostic procedures.
- Explore treatment options, both surgical and non-surgical, for each disease.

- **Treatments Provided by the Hospital:**
  - Browse and understand the range of eye care treatments and surgeries offered by the hospital.
  - Learn about the expertise of the hospital's medical team in handling specific eye conditions.

4. Spectacles:

- **Spectacles Catalogue:**
  - View a catalogue of available spectacle frames, categorized by style, material, and brand.
  - Access high-quality images and detailed descriptions of each spectacle frame.
- **Purchase Spectacles:**
  - Add selected spectacle frames to the cart and proceed to checkout.
  - Enter prescription details for lenses if required.
  - Make secure online payments for the selected spectacles.

5. Eye Disease Self-Detection:

- Upload or Capture Photo: Users can upload or capture a photo of their eyes using their device's camera.
- Image Analysis: The system employs advanced image analysis techniques to detect potential eye diseases based on uploaded photos.

User Functionalities:

1. Admin:

- **User Management:** Admins can manage user accounts, including patients, doctors, and spectacles users.
- **Content Management:** Control and update content related to the hospital, treatments, outreach activities, and testimonials.
- **Hospital Management:** Configure hospital settings and manage the availability of services.
- **Appointment Management:** Oversee appointment scheduling and availability.
- **Data Management:** Access and manage patient records, appointments, etc.

- **Spectacles Management:** Manage the inventory of available spectacles for purchase.
- **Chatbot Configuration:** Configure and update the chatbot's responses and interactions.

2. Patient:

- **Registration:** Patients can register for an account with their personal information.
- **Appointment Booking:** Schedule medical appointments or surgical consultations online.
- **Disease Information:** Access information on eye diseases, their symptoms, and available treatments.
- **Spectacles Purchase:** Browse and purchase spectacles.
- **Eye Disease Self-Detection:** Upload or capture eye photos to detect potential diseases.
- **Eye Donation Pledge:** Fill out an eye donation pledge form to pledge their eyes.
- **Insurance Information:** Access information related to insurance.
- **Testimonials:** Share their experiences and testimonials about the hospital's services.
- **Chatbot Interaction:** Interact with the chatbot for general inquiries and assistance.

3. Doctor:

- **Profile Management:** Create and manage a professional profile with specialization and availability.
- **Appointment Management:** Accept or reject appointment requests from patients.
- **Patient Consultation:** Access patient medical records, diagnose conditions, and prescribe treatments.
- **Chatbot Assistance:** Assist patients through the chatbot for non-emergency queries.
- **Outreach Activities:** Participate in and manage hospital outreach activities.

4. Spects:

- **Spectacles Catalogue:** Manage the catalogue of available spectacles, including images and descriptions.
- **Purchase Management:** Handle spectacles purchase transactions and shipping.
- **Inventory Management:** Monitor and restock spectacles inventory.

IrisGlow embodies a user-centric approach to eye care, offering seamless patient experiences, efficient hospital management, and accessibility to critical eye health information. The incorporation of advanced technology for eye disease self-detection empowers patients to take proactive steps towards eye health. The comprehensive range of features ensures that IrisGlow provides a holistic and enriching experience for both patients and medical professionals.

Mini Project:

Modules:

- Eye care
- Appointment
- Diseases

User Functionalities:

Admin:

- User Management, Content Management, Hospital Management, Appointment Management, Data Management

Patients:

- Registration, Appointment Booking, Disease Information, Eye Donation Pledge, Insurance Information, Testimonials

Doctors:

- Profile Management, Appointment Management, Patient Consultation, Outreach Activities

Main Project:

Modules:

- Spectacles
- Eye Disease Self-Detection

User Functionalities:

Admin:

- Spectacles Management, Chatbot Configuration

Patients:

- Spectacles Purchase, Eye Disease Self-Detection, Chatbot Interaction

Doctors:

- Chatbot Assistance

Spects:

- Spectacles Catalogue, Purchase Management, Inventory Management

Technologies to be implemented:

- Eye Disease Self-Detection (Machine Learning, Image Processing)
- Chatbot

Software specification:

- Frontend: HTML/CSS
- Backend: Django
- Database: Sqlite

References:

- https://aravind.org/
- https://www.dragarwal.com/